

Poverty, Pests and Street Pesticides

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Presentation Outline

- Introduction to problem
- Description of project, project methods & overview of findings
- Project challenges
- Project contribution to changes
- Key Lessons
- Value added from this research

Introduction

- High pesticide use in Cape Town's urban townships to combat poverty related pests (rats/mice, flies, cockroaches, bed bugs)
- Swarms of flies & cockroaches visibly present in homes
- Rat bites & damage high
- Uncollected rubbish, crowded conditions & poor quality housing promote pest infestations



Pesticide Use

- All pesticides toxic – acute & chronic health effects
- *Street Pesticides* – decanted into common containers, unlabelled and for unregistered uses sold at train stations & taxi ranks to urban poor -> ***cheap, effective, illegal, highly toxic, unregulated***
- Children mistakenly eat and drink SP
- Pesticide poisoning notifiable medical condition
 - Gross under-reporting; reporting of OP's only

Street Pesticides













Project Objectives

1. To document child poisoning cases resulting from “street pesticides” and commercially sold pesticides;
2. To document the types of pesticides being sold as “street pesticides”, as well as their source and sale-chain;
3. To document poor urban residents’ use patterns and perceptions of pesticides;
4. To advise on improving the current national system of pesticide poisoning notification; and
5. To develop a child pesticide poisoning guideline document.

Methods

- Record review & narrative research at RXH
- Household & observation survey in Khayelitsha & Philippi (N=200)
- Interviews with street sellers (N=20) & source investigations
- Review of notification process at RXH
- Child Pesticide Policy Reference Group (Univ. & gov't representatives)



Common Active Ingredients Found in Unlabelled Street Pesticides – Lab Analysis Findings

Active Ingredient	Pesticide Class	WHO Classification – Acute Hazards	Potential Chronic Health Effects
Methamidophos	organophosphate	Highly Hazardous <i>Class Ib</i>	Neurotoxic, reproductive toxic, developmental toxic, cancer
Cypermethrin	pyrethroid	Moderately Hazardous <i>Class II</i>	Neurotoxic, reproductive toxic, developmental toxic, cancer
Chlorpyrifos	organophosphate	Moderately Hazardous <i>Class II</i>	Neurotoxic, dermatotoxic, birth defects, cancer
Chlorpyrifos-methyl	organophosphate	Limited acute hazards <i>Class U</i>	Neurotoxic, dermatotoxic, birth defects, cancer
Aldicarb	carbamate	Extremely Hazardous <i>Class Ia</i>	Neurotoxic, reproductive toxic, developmental toxic, cancer, dermatotoxic

Aldicarb (carbamate)

LD50 1mg/kg

Nematicide; Banned
in several countries



Sample 1: 52mg in .3245g &



Sample 2: 60mg in .3619g

Aldicarb as Rat Poison

- mixed with local food; eaten by children





Children Taken to a Western Cape Hospital with Suspected Pesticide Poisoning

April 2008-April 2009

Total no. of children	N=54
Males	25 (56%)
Females	28 (52%)
Age	
1-12 Months	11 (20%)
1-2 Years	18 (33%)
2-4 Years	12 (22%)
4-10 Years	11 (20%)
10+ Years	2 (4%)
Most Cases from Khayelitsha	16 (30%)
No. Hospitalized (1-10 days)	39 (72%)
No. of cases where use of street pesticides is suspected	36 (67%)
No of cases notified to Dept. of Health	14 (26%)

WHICH OF THESE WAS YOUR CHILD EXPOSED TO?

ORGANOPHOSPHATES

Clear/Yellow= potentially methamidophos;
White = potentially chlorpyrifos



PYRETHROIDS



CARBAMATES

Aldicarb



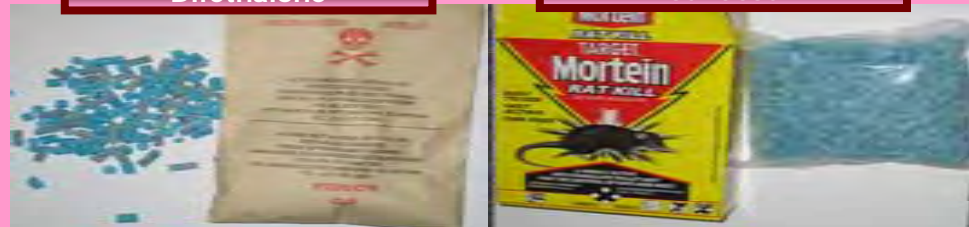
ANTICOAGULANTS

Difethalone



Difethalone

Brodifacoum



NAPHTHALENE



Addressing Project Challenges

- Researching the “un-researchable”
 - Unlabelled products -> challenge to link to child poisonings
 - Illegal products -> sellers nervous; source identification complex
- Analysis of highly toxic high concentrations
 - Damaged lab equipment
 - Finding labs to analyze difficult
 - EHP and DOH need to submit samples to labs
- How to regularly monitor use of *new* street pesticides -> continuous research

Project Contribution to Institutional/Legislative/Policy Changes

- ***Point chart*** – improving poisoning notification & treatment
- ***Research data*** – informing policy (e.g., City of CT altered practice of decanting rat poisons; identification of street pesticides & source; highlighting Freq. use of SP; fear of cats)
- ***Guideline for EHP's on child pesticide poisoning*** – promoting risk reduction management through resource provision/training
- ***Policy briefs*** & pamphlets – risk communication, informing policy, awareness raising
- ***Rat trap distribution*** – assessing viability and community acceptance of pest control alternatives

Project Links to Programmes

- Local – City of Cape Town
 - Improving Pest control initiatives and strategies
 - Improving Notification
 - EHP capacity building, particularly for follow-ups
 - Awareness raising (pamphlets, publications, conferences, meeting attendance)

- Provincial
 - Health Promotion - Training of Health Promoters
 - Awareness raising
 - Improving Notification

- National
 - Reducing environmental health risks
 - Improving Notification – implementation of legislation/policy (DOH and RXH Poison Information Centre)
 - Information provision for policy, strategic planning and service delivery

Key Lessons

- *Linkages/networking between research institutions & gov't key to risk reduction*
 - Cockroach powder example



- *Risk reduction would be enhanced through service delivery*
 - Regular removal of rubbish vital
 - Provincial & national provision of non-toxic pest control (e.g., rat traps)
 - Rodent proof housing
 - Improve notification
 - More intensive EHP interventions on pest control & poison prevention

Key Lessons (cont.)

- Poverty alleviation strategies undermined through lack of integration/recognition of poor communities “small” issues/problems
 - e.g., pest control and SP (e.g., with housing, waste mngmt, environ. planning)
- Local research; National problem
 - Replicate research in other provinces to inform policy & practices, & reduce risks

Key Lessons (cont)

- Access to pesticide risk information lacking at community and service provider level (i.e., gov't)
 - communication about street pesticides, particularly for illiterate populations – promote informed decision-making
- Tackle problem not at street seller level but at policy level – e.g., control industry selling chemicals; industry to provide alternatives for street sellers to sell
- Strategies for reducing “rat friendly” environments need to be urgently implemented

Value Added from this Research

- Highlighting a neglected/ignored major problem
- Awareness raising at all levels
- Mechanisms for improving situation identified/implemented
- Networking enhanced between gov't and research institutions



Download pamphlet at:
<http://www.oehru.uct.ac.za/publications/pestrel.php>

What can I do as a parent???

- Keep pesticides locked away & out of reach of children
- Keep pesticides in their original labeled container
- Keep children out of the house during spraying and air out before entering
- Know the signs and symptoms
- If your child has pesticide poisoning:
 1. Go to a doctor/clinic immediately!
 2. Take the label or pesticide with you!!!
 3. Prevent it from happening again!!!



Poison information (24hrs)
021-6895227

Did you know???

- Pesticide labels tell you how dangerous they are. Look for the colour code on the front of this pamphlet & match it with the colour strip on the pesticide container.
- Pesticides can cause cancer, behavioural problems, allergies & asthma.
- Pesticides stay in the environment for many years.
- Pregnant woman should avoid use of or exposure to all pesticides.
- Unlabelled pesticides are very dangerous.
- Pesticides sold by street vendors can be illegal & very toxic.

NO Don't Use These!



street pesticides

NO

VERY DANGEROUS!!!

WHAT IS DAMAGING YOUR CHILD?



Pesticide Label Color Codes

- **Very Toxic**
 - **Harmful**
 - **Caution**
 - **Keep locked away**
- Found on pesticides bought in shops.



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